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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,840

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EXAMINER

KHAN, TAHSEEN

ART UNIT

PAPER NUMBER

1794

NOTIFICATION DATE

DELIVERY MODE

01/22/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/594,840	Applicant(s) YOKOYAMA ET AL.	
	Examiner TAHSEEN KHAN	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 14-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>09/28/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-13, in the reply filed on 10/26/2009 is acknowledged. Claims 14-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method for producing a patterned substrate, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/26/2009.

Claim Rejections - 35 USC § 102/103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over *Kobayashi* JP_2004/071473_A (see Machine English Translation).

6. Regarding claims 1-10 and 12-13, *Kobayashi* discloses forming a **pattern** (Title) on a **substrate** whereon the substrate has a wettability variable layer (element 3 in Figures 1-6 and Abstract; corresponds to claimed forming layer (B)). *Kobayashi* further discloses that its wettability variable layer (aka "wettability -- strange -- voltinism -- the layer", element 3 in Figures 1-6; corresponds to claimed forming layer (B)) can be comprised of an **organic polysilane** (paragraphs 0028-0032, and 0086). *Kobayashi* also discloses that part its wettability variable layer (aka "wettability -- strange -- voltinism -- the layer", element 3 in Figures 1-6; corresponds to claimed forming layer (B)) can be **irradiated** by UV light via a **mask** to form high-wettability irradiated portions (element 3A in Figures 4-6) on its layer (Abstract and paragraphs 0016, 0038, 0087). *Kobayashi* additionally discloses **applying a solution** (aka "coating liquid"; element 10 in Figure 4) comprised of a **hydrophilic solvent** (paragraphs 0049, 0055, and 0080), **water** (paragraph 0055), and **polymers** such as **polyanilines** (paragraph 0052) and **polythiophenes** (paragraph 0088) to form a **layer** (element 10' in Figures 4-7) over at least the irradiated portions. Since *Kobayashi* discloses having electrodes and known conductive **oxides** like ITO (paragraph 0068) on its substrate, it would therefore be analogous to the claimed conductive substrate (A). Lastly, *Kobayashi* discloses that its patterned substrate can be used in **organic devices, organic transistors, organic solar cells, organic electroluminescence devices**, etc. (paragraph 0004).

7. Regarding claims 1-7, the processes of forming the patterned substrate disclosed in claims 1-7 are not essential to a determination of patentability of the composition disclosed in the claim. The patentability of product-by-process claims is based on the product itself. “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). See MPEP 2113. The examiner respectfully submits that none of the limitations claimed in claims 1-7 by applicants impart a structural property in the end product of their claimed patterned substrate.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Kobayashi* JP_2004/071473_A (see Machine English Translation) in view of *Veres* WO_2004/013922_A2.

9. Regarding claim 11, *Kobayashi* discloses that its patterned substrate can be used to form organic devices, organic transistors, organic solar cells, organic electroluminescence devices, etc. (paragraph 0004). However, it does not disclose forming photosensors.

10. *Veres* discloses forming a pattern on a substrate that can be used in organic electronic devices such as organic solar cells and organic photosensors (Abstract).

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11. It would have been obvious to one of ordinary skill in the art to use the patterned substrate, of *Kobayashi*, for devices such as photosensors as exemplified by *Veres*.

One of ordinary skill in the art would have been motivated in doing so due to the analogous subject matter as well as the fact that *Veres* uses its patterned substrate in organic solar cells, as does *Kobayashi*.

CONCLUSION

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAHSEEN KHAN whose telephone number is (571)270-1140. The examiner can normally be reached on Monday to Thursday from 7:30am-5:30pm EST.

13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on (571)272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T.N.K./

TAHSEEN N. KHAN

Patent Examiner, Art Unit 1794

January 18, 2010

/David R. Sample/

Supervisory Patent Examiner, Art Unit 1794